

**ABSTRACT**

A method and apparatus are described for providing an activation signal based on a received radio frequency (RF) signal. The apparatus includes an RF receiver configured to admit a received RF signal in a given frequency band and a converter configured to convert the admitted RF signal to a proportional signal. The apparatus  
5 also includes a low power comparator that has a first and second input and an output. A biasing and offset compensation circuit is configured to bias the proportional signal higher by an offset midrange voltage and bias the second input to an offset compensated voltage based on an offset between the inputs of the comparator. The comparator is configured to receive the biased proportional signal at the first input and  
10 produce the activation signal at the output when a voltage difference between the biased proportional signal and the offset compensated voltage exceeds a comparison voltage threshold.